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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,928	11/21/2003	Ammar Al-Ali	MLABS.020A	3516

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EXAMINER
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PRETLOW, DEMETRIUS R

ART UNIT	PAPER NUMBER
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2863

DATE MAILED: 11/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/719,928

Applicant(s)

AL-ALI, AMMAR

Examiner

Demetrius R. Pretlow

Art Unit

2863



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 25-28 is/are allowed.
- 6) ☒ Claim(s) 1, 14, 15, 17-20 and 22 is/are rejected.
- 7) ☒ Claim(s) 2-13, 21-24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 22 recites the limitation "said sync event" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim.

Claim 19 recites the limitation "said switches" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Objections***

Claim 16 is objected to because of the following informalities:

In line 2, applicant claims --at least one detector comprises a plurality of detectors-- is unclear to the examiner. Examiner can not find support for this limitation in the disclosure or the drawings. No art was applied to this claim. Appropriate correction is required.

### ***Specification***

The disclosure is objected to because of the following informalities: In line 2, applicant claims --at least one detector comprises a plurality of detectors--, there is no support for this limitation in the disclosure.

Appropriate correction is required.

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, in claim 16, lines 1-2

the --at least one detector comprises a plurality of detectors-- must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 14 is rejected under 35 U.S.C. 102(b) as being anticipated by Takatani et al. (US 5,490,506). Takatani et al. teach a multiplicity of emitters configured to transmit at least three distinct wavelengths of optical radiation into a tissue site; Note Takatani et al. column 7, lines 17-22. Takatani et al. teach at least one detector configured to receive said radiation after attenuation by said tissue and to generate a corresponding detector signal output. Note Takatani et al. column 7, lines 31-67 and Figures 1-6. Takatani et al. teach a wavelength controller having a drive signal input and a sensor control output adapted to sequentially enable said emitters. Note Takatani et al. column 7, lines 52-67.

Claim 20 is rejected under 35 U.S.C. 102(b) as being anticipated by Diab et al. (US 2001/0029326). Diab et al. teach communicating a drive signal from a monitor to a sensor. Note Figure 10 items, 300,304,302,320 makes up the sensor and the items to the right makeup the monitor, also note paragraph 158, lines 7-10. Diab et al. teach sequentially enabling a plurality of emitters of said sensor. Note Diab et al. paragraph, 161, lines 1-17. Diab et al. teach communicating a sensor signal from said sensor to said monitor. Note Figure 10 and paragraph 161, lines 5-13. Diab et al. teach synchronizing said sensor with said monitor. Note Figure 10 item 350.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takatani et al. in view of Diab et al. (US 2001/0029326). Takatani et al. teach the limitations above.

Takatani et al. does not teach an output multiplexer that selectively routes said drive signal to said emitters.

Diab et al. teach an output multiplexer that selectively routes said drive signal to said emitters. Note Diab et al. paragraph 163 to paragraph 164.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention of Takatani et al. to include the teaching of Diab et al. because it would allow the saturation to be determined using a ratiometric method. Note Diab et al. paragraph 163, line 2-4.

In reference to claim 18, Takatani et al. does not teach a plurality of switches that connect said drive signal to said emitters.

Diab et al. teach plurality of switches that connect said drive signal to said emitters. (switch for each LED) Note Diab et al. paragraph 164, lines 4-6.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention of Takatani et al. to include the teaching of Diab et al. because it would allow the saturation to be determined using a ratiometric method. Note Diab et al. paragraph 163, line 2-4.

In reference to claim 19, Takatani et al. does not teach a switch control that selectively actuates said switches.

Diab et al. teach plurality of switches that connect said drive signal to said emitters. (switch for each LED). Note Diab et al. paragraph 164, lines 4-6. This suggests that some control element is used in order to activate the LED's. Note Diab et al. paragraph 164, lines 4-10.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention of Takatani et al. to include the teaching of Diab et al. because it would allow the saturation to be determined using a ratiometric method. Note Diab et al. paragraph 163, line 2-4.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takatani et al. in view of Hatschek (US 4,890,629). Takatani et al. teach the limitations above.

Takatani et al. does not teach the wavelength controller selects said emitters in pairs, each of said emitters enabled according to said drive signal.

Hatschek teach the wavelength controller selects said emitters in pairs, each of said emitters enabled according to said drive signal. Note Hatschek column 12, lines 18-27.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention of Takatani et al. to include the teaching of Hatschek because it would compute the oxygen saturation from light intensities of light signals having three different wave lengths. Note Hatschek column 12, lines 24-26

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fein et al. (US 2002/0038081) in view of Weber et al. (US 6,430,525). Fein et al teach a software

upgrad installable in said monitor so as to enable said monitor to operate in conjunction with a multiple wavelength sensor. Note Fein et al. paragraphs 22 and paragraphs 32-35. Fein et al. does not explicitly teach a wavelength controller adapted to upgrade so as to drive said sensor however Fein et al. does teach a controller 64 provides signals to a drive circuit 66, to control the amount of drive current provided to LEDs 52 which the examiner considers to be equivalent.

Fein et al. does not teach a monitor configured to provide an oxygen saturation measurement based upon the absorption of two wavelengths of optical radiation by a tissue site.

Weber et al. teach a monitor configured to provide an oxygen saturation measurement based upon the absorption of two wavelengths of optical radiation by a tissue site. Note Weber et al. column 10 lines 65-67 to column 11, lines 1-17.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention of Fein et al. to include the limitations of Weber et al. because it would allow a mode parameter can be varied in real-time to achieve a tradeoff between the suppression of false alarms and signal artifacts and the immediate detection of life threatening oxygen desaturation events. Note Abstract lines 14-18.

***Allowable Subject Matter***



Claims 2-13,21-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 25-28 are allowed.

The best prior art of record, particularly Fein et al. (US 2002/0038081), teach performing these updates is by encoding revisions to the algorithms used for calculating the patient parameters in memory within the oximeter monitor, while encoding updated software code or tuning coefficients in sensor memory 56. Note paragraph 33, lines 1-5. However Fein et al. does not teach the following claim limitations.

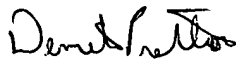
The primary reason for the allowance of is the inclusion of the limitations of an a software upgrade means for enabling a pulse oximetry monitor to drive said sensor and process a corresponding sensor signal; and a wavelength controller means for interfacing between said software upgrade means and said multiple wavelength sensor means. It is these limitations found in each of the claims, as they are claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Demetrius R. Pretlow whose telephone number is (703) 272-2278. The examiner can normally be reached on 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

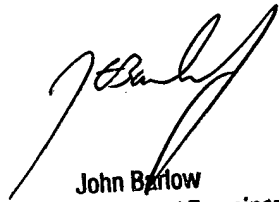
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Demetrius R. Pretlow



11/18/09

Patent Examiner



John Barlow  
Supervisory Patent Examiner  
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